

WHAT IS CLAIMED IS:

1. A pattern string matching apparatus for effecting a process for matching between first and second pattern strings each including a plurality of patterns, comprising:

voting means for casting a vote according to a position of a matched pattern in the first pattern string and a position of a matched pattern in the second pattern string when a pattern of the first pattern string is matched with a pattern of the second pattern string; and

determining means for determining the result of matching based on the result of voting by said voting means.

2. The pattern string matching apparatus according to claim 1, which further comprises forming means for forming a matrix having rows corresponding to the patterns of the first pattern string and columns corresponding to the patterns of the second pattern string and in which said voting means votes for a position in which the row and column corresponding to the matched patterns intersect each other in the matrix formed by said forming means when a pattern of the first pattern string is matched with a pattern of the second pattern string and said determining means determines the result of matching based on the result of voting for the matrix by said voting means.

3. The pattern string matching apparatus according to claim 2, which further comprises calculating means for calculating calculation values related to the result of voting in an oblique direction of the matrix for which votes are cast by said voting means and in which said determining means determines the result of matching based on the calculated values of the voting result calculated by said calculating means.

4. The pattern string matching apparatus according to claim 1, which further comprises a memory for storing calculated values in an oblique direction of a matrix having rows corresponding to the patterns of the first pattern string and columns corresponding to the patterns of the second pattern string when a pattern of the first pattern string is matched with a pattern of the second pattern string and in which values voted by said voting means are calculated in the oblique direction of the matrix and accumulated in said memory and the result of matching is determined based on the calculated values accumulated in said memory when a voting process by said voting means is completed.

5. The pattern string matching apparatus according to claim 2, wherein said calculating means calculates calculation values related to the result of voting by use of a normalized value and said

determining means determines the result of matching based on the calculated values related to the normalized voting result.

6. The pattern string matching apparatus
5 according to claim 2, wherein said determining means determines a portion of the first pattern string which is matched with the second pattern string based the calculated values by said calculating means, the length of the first pattern string and the length of the
10 second pattern string.

7. The pattern string matching apparatus according to claim 1, which further comprises a first table for specifying types of the patterns appearing in the first pattern string and the orders of the patterns appearing in the first pattern string; and a second table for storing calculated values related to the voting result for each of various types of second pattern strings which are set to correspond to the orders of appearance and the types of the patterns specified by said first table and in which said voting means votes for said second table which is set to correspond to the orders of appearance and the types of the patterns specified by said first table for each pattern of the first pattern string and said
15 determining means determines the result of matching based on the second table for which said voting means
20 votes.
25

8. The pattern string matching apparatus according to claim 2, wherein the first pattern string is a first character string having a plurality of characters, and the second pattern string is a second character string having a plurality of characters.

9. The pattern string matching apparatus according to claim 2, wherein the first pattern string is a first character string having recognized characters each having similarity, the second pattern string is a second character string which is registered in a dictionary, and said voting means votes according to the degree of similarity of recognized character of the first character string.

10. The pattern string matching apparatus according to claim 2, wherein the first pattern string is a first character string including character candidates each having the priority order, the second pattern string is a second character string which is registered in a dictionary, and said voting means casts votes weighted based on the priority order of the character candidate of the first character string.

11. A pattern string matching method for effecting a matching process between first and second pattern strings each including a plurality of patterns, comprising the steps of:

voting according to a position of a matched pattern in the first pattern string and a position of

a matched pattern in the second pattern string when a pattern of the first pattern string is matched with a pattern of the second pattern string; and

5 determining the result of matching based on the result of voting.

12. The pattern string matching method according to claim 11, which further comprises the step of forming a matrix having rows corresponding to the patterns of the first pattern string and columns corresponding to the patterns of the second pattern string and in which said voting step is to vote for a position in which the row and column corresponding to the matched patterns intersect each other in the matrix formed when a pattern of the first pattern string is 10 matched with a pattern of the second pattern string and said determining step is to determine the result of matching based on the result of voting for the matrix.

15 13. The pattern string matching method according to claim 12, which further comprises the step of calculating calculation values related to the result of voting in an oblique direction of the matrix for which votes are cast and in which said determining step is to 20 determine the result of matching based on the calculated values of the voting result.

25 14. The pattern string matching method according to claim 11, wherein said voting step is to accumulate calculated values into a memory which stores

the calculated values in an oblique direction of
a matrix having rows corresponding to the patterns
of the first pattern string and columns corresponding
to the patterns of the second pattern string when
5 a pattern of the first pattern string is matched with
a pattern of the second pattern string and said
determining step is to determine the result of matching
based on the calculated values accumulated in the
memory when a voting process is completed.

10 15. The pattern string matching method according
to claim 12, wherein said calculating step is to
calculate calculation values related to the result
of voting by use of a normalized value and said
determining step is to determine the result of
matching based on the calculated values related to
15 the normalized voting result.

16. The pattern string matching method according
to claim 12, wherein said determining step is to
determine a portion of the first pattern string which
20 is matched with the second pattern string based on the
calculated values in said calculating step, the length
of the first pattern string and the length of the
second pattern string.

17. The pattern string matching method according
25 to claim 11, wherein said voting step is to vote for
a second table to which types of patterns specified in
a first table and the priority orders of the patterns

appearing in the first pattern string are set to correspond for each pattern of the first pattern string, the first table is a table for specifying the types of the patterns appearing in the first
5 pattern string and the priority orders of the patterns appearing in the first pattern string, and the second table is a table for storing calculated values related to the voting result in the oblique direction of the matrix for each of various types of second pattern
10 strings according to the priority order of appearance and the type of the pattern specified by the first table, and said determining step is to determine the result of matching based on the second table voted.

18. The pattern string matching method according
15 to claim 12, wherein the first pattern string is a first character string having a plurality of characters, and the second pattern string is a second character string having a plurality of characters.

19. The pattern string matching method according
20 to claim 12, wherein the first pattern string is a first character string including recognized characters each having similarity, the second pattern string is a second character string which is registered in a dictionary, and said voting step is to vote
25 according to the degree of similarity of recognized character of the first character string.

20. The pattern string matching method according

to claim 12, wherein the first pattern string is
a first character string including character candidates
each having the priority order, the second pattern
string is a second character string which is registered
5 in a dictionary, and said voting step is to cast votes
weighted based on the priority order of the character
candidate of the first character string.